

# REQUEST FOR ACCESS OF ABANDONED APPLICATION UNDER 37 CFR 1.14(a)

In re Application of	
Application Number	Filed
08/332,046	11-1-94
Group Art Unit	Examiner

Paper No. \_\_\_\_\_

Assistant Commissioner for Patents  
Washington, DC 20231

I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

- ☒ (A) referred to in United States Patent Number 6,248,516 column \_\_\_\_\_
- \_\_\_\_ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11, i.e., Application No. \_\_\_\_\_ filed \_\_\_\_\_ on page \_\_\_\_\_ of paper number \_\_\_\_\_
- \_\_\_\_ (C) an application that claims the benefit of the filing date of an application that is open to public inspection, i.e., Application No. \_\_\_\_\_ filed \_\_\_\_\_ or
- \_\_\_\_ (D) an application in which the applicant has filed an authorization to lay open the complete application to the public.

Please direct any correspondence concerning this request to the following address:

Curtis Brantley

Signature

Curtis Brantley

Typed or printed name

Date

FOR PTO USE ONLY

Approved by: \_\_\_\_\_  
(Initials)

Unit: \_\_\_\_\_



US006248516B1

**(12) United States Patent**  
**Winter et al.****(10) Patent No.: US 6,248,516 B1**  
**(45) Date of Patent: Jun. 19, 2001****(54) SINGLE DOMAIN LIGANDS, RECEPTORS  
COMPRISING SAID LIGANDS METHODS  
FOR THEIR PRODUCTION, AND USE OF  
SAID LIGANDS AND RECEPTORS**4,965,188 10/1990 Mullis et al. .  
4,978,743 12/1990 Selbeck et al. .  
4,983,728 1/1991 Herzog et al. .  
5,023,171 6/1991 Ho et al. .

(List continued on next page.)

**(75) Inventors: Gregory Paul Winter; Elizabeth Sally  
Ward, both of Cambridge; Detlef  
Güssow, Abington, all of (GB)****(73) Assignee: Medical Research Council, London  
(GB)****(\*) Notice:** Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.**(21) Appl. No.: 08/470,031****(22) Filed: Jun. 6, 1995****FOREIGN PATENT DOCUMENTS**2016841 11/1990 (CA) .  
2019323 12/1990 (CA) .  
0 120 694 10/1984 (EP) .  
0 125 023 11/1984 (EP) .  
0 171 496 2/1986 (EP) .  
0 173 494 3/1986 (EP) .  
0 194 276 B1 9/1986 (EP) .  
0 200 362 12/1986 (EP) .  
0 201 184 B1 12/1986 (EP) .  
0 239 400 9/1987 (EP) .  
0 368 684 5/1990 (EP) .  
2 137 631 10/1984 (GB) .  
61-104788 5/1986 (JP) .  
63-152984 6/1988 (JP) .  
WO 86/01533 3/1986 (WO) .  
WO 87/02671 5/1987 (WO) .  
WO-A  
88/01649 3/1988 (WO) .  
WO 88/0663 9/1988 (WO) .  
WO 88/06630 9/1988 (WO) .  
WO 88/09344 12/1988 (WO) .  
WO 89/00999 2/1989 (WO) .  
WO 90/14424 11/1990 (WO) .  
WO 90/14430 11/1990 (WO) .  
WO 90/14443 11/1990 (WO) .  
WO-A  
97/08320 3/1997 (WO) .**Related U.S. Application Data****(62)** Division of application No. 08/332,046, filed on Nov. 1,  
1994, which is a continuation of application No. 07/796,805,  
filed on Nov. 25, 1991, which is a division of application No.  
07/580,374, filed on Sep. 11, 1990, now abandoned.**(30) Foreign Application Priority Data**Nov. 11, 1988 (GB) ..... 8826444  
Mar. 16, 1989 (GB) ..... 8906034  
Apr. 22, 1989 (GB) ..... 8909217  
May 15, 1989 (GB) ..... 8911047  
Jun. 2, 1989 (GB) ..... 8912652  
Jun. 16, 1989 (GB) ..... 8913900  
Aug. 15, 1989 (GB) ..... 8918543  
Nov. 13, 1989 (WO) ..... PCT/GB89/01344**(51) Int. Cl.** ..... **C12Q 1/68****(52) U.S. Cl.** ..... **435/6; 435/69.6; 435/252.33;  
435/441; 435/446****(58) Field of Search** ..... **435/240.2, 252.3,  
435/252.33, 6, 69.6, 441, 446; 536/23.7,  
23.4, 23.5, 23.6****(56) References Cited****U.S. PATENT DOCUMENTS**4,356,270 10/1982 Itakura .  
4,642,334 2/1987 Moore et al. .  
4,656,134 4/1987 Ringold .  
4,683,195 7/1987 Mullis et al. .  
4,683,202 7/1987 Mullis .  
4,704,692 11/1987 Ladner .  
4,711,845 12/1987 Gelfand et al. .  
4,714,681 12/1987 Reading .  
4,800,159 1/1989 Mullis et al. .  
4,806,471 2/1989 Molin et al. .  
4,816,397 3/1989 Boss et al. .  
4,889,818 12/1989 Gelfand et al. .  
4,937,193 6/1990 Hinchliffe et al. .  
4,946,786 8/1990 Tabor et al. .  
4,959,317 9/1990 Sauer .**OTHER PUBLICATIONS**Kokubu, F., et al, *The EMBO Journal*, vol. 7, No. 7, pp.  
1979-1988, 1988 "Complete structure and organization of  
immunoglobulin heavy chain constant region genes in a  
phylogenetically primitive vertebrate".  
Schwager, J., et al, *Proc. Natl. Acad. Sci. USA*, vol. 85, pp.  
2245-2249, Apr. 1988 Immunology "Amino acid sequence  
of heavy chain from *Xenopus laevis* IgM deduced from  
cDNA sequence: Implications for evolution of immunoglo-  
bulin domains".  
Roth, M.E., et al, *Science*, vol. 241, pp. 1354-1358, Sep. 9,  
1988 "Selection of Variable-Joining Region Combinations  
in the  $\alpha$  Chain of the T Cell Receptor".

(List continued on next page.)

*Primary Examiner*—James Ketter*(74) Attorney, Agent, or Firm*—Nixon & Vanderhye PC**(57) ABSTRACT**The present invention relates to single domain ligands  
derived from molecules in the immunoglobulin (Ig)  
superfamily, receptors comprising at least one such ligand,  
methods for cloning, amplifying and expressing DNA  
sequences encoding such ligands, preferably using the poly-  
merase chain reaction, methods for the use of said DNA  
sequences in the production of Ig-type molecules and said  
ligands or receptors, and the use of said ligands or receptors  
in therapy, diagnosis and catalysis.**21 Claims, 23 Drawing Sheets**